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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Before the Board of Patent Appeals and Interferences

In re Application of

Sergei Mikhailovich SAFRONOV et al Art Unit: 3713

S. N. 09/601,913 Examiner: A. P. Rada  
International S.N.: PCT/RU99/00144

Filed: August 8, 2000  
International Filing Date: April 29, 1999

For: METHOD FOR PLAYING A SPACE GAME  
AND DEVICES FOR REALIZING THIS METHOD

CORRECTED BRIEF ON BEHALF OF APPELLANT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is an appeal from the Examiner's final rejection mailed September 13, 2001. This corrected brief is in response to the Examiner's action mailed December 10, 2002.

REAL PARTY IN INTEREST

The real party in interest is Sergei Mikhailovich SAFRONOV,  
UL. Malysheva, D.19, Korp.1, Kv.20, Moscow, Russian Federation  
119263, the assignee of the application (and also a co-inventor).

RELATED APPEALS AND INTERFERENCES

No related appeals or interferences are known to appellant,  
the appellant's legal representative, or assignee, which will

Page 1

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

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directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-16 are pending in the application, and are rejected, and are the claims under appeal. Appellant wishes to prosecute this appeal with respect to claims 1-16. An amendment after final was not entered by the Examiner.

This application was originally filed August 8, 2000, as an entry into the national phase in the U.S. of a PCT application. A final office action was issued September 13, 2001. Thus, this appeal was filed.

STATUS OF AMENDMENTS

The amendment after final was not entered and is therefore not the basis of the arguments on appeal. Applicants proceed on the basis of the amendment in response to the first office action having been entered.

SUMMARY OF THE INVENTION

This invention relates to playing a space game, wherein objects in outer space are employed to provide the elements of chance or upon which the outcome of the game may be determined. For example, referring to FIG. 1, and the specification page 7, lines 10 and following, game elements 1 are capable of moving in

Page 2

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

{\\Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC}

space and their interaction and relation to a game assessment element 3 is determined by game registration facility 2.

Many game variations are possible thereby. The game elements 1 may comprise, for example, space vehicles (page 7, line 21) racing space vehicles (page 10, line 20), space waste (page 13, line 21), small particles originated from explosion of a carrier rocket (page 15, lines 26-27), articles of artificial, for instance, technogenic, and/or natural origin, such as, small space objects, meteorite particles (page 17, lines 17-18).

The game registration facility 2 may comprise, for example, a command-and-measuring system (page 10, line 5), a space object movement detection device (page 10, line 22), a facility adapted to register hitting the game fields on the means 3 by game elements 1 (page 13, lines 18-19) such as hit detection instruments, such as, for instance, particle detectors to sense the facts of interaction between the panel and particles moving at appropriate relative speeds (page 13, line 32 - page 14 line 2), space particle detectors employed in the project of "Vega" interplanetary SV in flight to Halley's Comet, or a meteorite particle detector mounted on USA satellites "Pegas 1, 2, 3", LDEF, the data obtained being transmitted to the Earth (page 14, lines 9-12).

As for the game assessment element 3, it can comprise for instance, space objects of technogenic origin, such as a satellite or space waste or of natural origin such as a planet or small space object (page 8, lines 11-14).

The game may be played based on the time of approaching the assessment element based on time (e.g., getting there first, or getting there last) or speed of interacting with the element (hit speed), performing some interaction with the element (coupling, changing orbit thereof, etc.) (page 11 line 27 and following).

The game elements can also be space objects such as space waste, or meteorites, and the assessment element is a portion of a space vehicle, for example, and the collision of the space waste with the space vehicle can be what is registered.

#### THE ISSUES

The broad issue presented in this appeal is whether the Examiner's final rejections of claims 1-16 are correct. The issue may be stated more narrowly as:

1. Whether claims 1-16 contain subject matter under 35 U.S.C. §112, first paragraph, that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is mot nearly connected, to make and/or use the invention.

Page 4

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

(\\Files\\Files\\Correspondence\\May  
2003\\v177correctedappealbrief050103.DOC)

2. Whether claims 1-16 are indefinite under 35 U.S.C. §112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

GROUPING OF CLAIMS

Claim 1, 12, 13 and 16 stand or fall together with respect to the 35 U.S.C. §112, first paragraph rejection, but do not necessarily stand or fall with claims 2-11, 14 and 15. Similarly, each of claims 2-11, 14 and 15 do not stand or fall together with any of the other such claims. Arguments to this point are presented below in the argument section.

Claims 1-12 and 16 stand or fall separate from one another with respect to the 35 U.S.C. §112, second paragraph rejection. Claims 13-15 stand or fall together with respect to the 35 U.S.C. §112, second paragraph rejection. Claims 1-12 and 16 do not necessarily stand or fall with claims 13-15. Arguments to this point are presented below in the argument section.

ARGUMENT

Argument regarding Grouping of claims

With respect to the section 112, first paragraph rejections, even if the terms in claims 1, 12, 13 and 16 were to be held as containing subject matter not in the specification (which point

Page 5

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

[\\"Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC]

applicant is not conceding) the further definitions added by the claims dependent thereon separately add subject matter that is described sufficient for one skilled in the art to make and/or use the invention. Therefore, it is respectfully submitted that the claims 2-11, 14 and 15 do not stand or fall together and do not stand or fall with claims 1, 12, 13 and 16.

Applicant's reason for this is that the Examiner specifically raises issues with particular phrases in claims 1, 12, 13 and 16. The particular questions by the Examiner are how does one:

1. register an event using a facility by a spatial position
2. how is the interest of the game captured
3. what is the benefit
4. how does the assessment means get disposed in space
5. what is the process

Assuming, only for argument purposes herein with respect to grouping of the claims, that claim 1 (and 12, 13 and 16) contain subject matter not described in such a way as to enable one skilled in the art, claims 2-11, 14 and 15 then each separately add further terms which are respectfully believed to be sufficiently described to enable one of skill in the art to practice the invention. Definitions of particular details as to what can be encompassed by these particular claim terms, so as to

render claims 2-11, 14 and 15 enabling without regard to whether claims 1, 12, 13 and 16 are enabling. In particular, claim 2 adds that the game elements are space vehicles. Applicants need not teach or describe how to launch space vehicles into space. One of ordinary skill in the art can readily determine that. Therefore, even if claim 1, is rejectable (which applicant believes it is not rejectable) under section 112, first paragraph, claim 2 adds details that the elements are space vehicles. Anyone of skill in the art, and even those of less than ordinary skill in the art, can readily understand and comprehend what a space vehicle is. Also, with regard to whether claim 2 is definite (section 112, second paragraph), even if claim 1 is not definite, claim 2 adds more detail, making claim 2 even more definite than claim 1. A space vehicle as a game element is clearly more definite than in the parent claim.

Claim 3 adds that the registering of a game event occurrence is effected by a space vehicle which is the fastest to reach a position of the game event assessment means. This clearly adds further definition and detail beyond that of claim 2 and makes it readily apparent that the object of the game is for a vehicle to be the fastest to reach the position of the game assessment means (i.e., the target). This is even more definite and more enabling than the claims from which it depends. This provides yet further

separate grounds to find this claim allowable from claim 1 or claim 2 as being separately enabling (first to the target wins).

Claim 4 recites the game event assessment means is a space waste, said space waste being captured on reaching its position. Again, even if claim 1 is non-enabling, claim 4 adds so much more definition and detail here, that it becomes separately considerable from claim 1, and therefore does not stand or fall under the section 112 first paragraph rejection, with claim 1. Similarly, claim 4 has further definition of an element beyond that of claims 2 and 3, and is capable therefore of separately standing or falling from those claims, since a scenario might be imaginable where claims 1, 2 and 3 are not sufficiently enabling, but claim 4 could be (that is, the desire of the game is to capture the waste and win the game). A similar analysis applies with respect to definiteness.

Claim 5 adds to claim 2 that registering of a game event occurrence is effected by a space vehicle which has gone the longest distance to the game event assessment device. Thus taking the longest route to get to the target is a separate manner of winning the game, and even if claims 1 and 2 (as well as 3 and 4) are not enabling, the addition of the language of claim 5 can provide sufficient further enablement to make this

claim separately allowable. A similar analysis applies with respect to definiteness.

Claim 6 depends from 2 adding that registering of a game event occurrence is effected by a space vehicle which has gone at the shortest distance from the game event assessment means.

Thus, the shortest travel distance vehicle wins. Again, even if the other claims 1-5 were not enabled, claim 6 can be considered to have separate enabling issues from those other claims, given the further definition of the concept of what it takes to win the game. A similar analysis applies with respect to definiteness.

Claim 7, adds to claim 2 that the assessment means is a planet. Similar to claims 5 and 6, this adds yet a different twist to claim 2, and could separately stand from claims 1-6, both with respect to enablement and to definiteness.

Claim 8 also has a corresponding difference, adding that the assessment means is a space vehicle launched prior to said accepting of bets on a registration of a game event. For similar reasons as given above, this can be construed to have separate allowability issues with regard to whether it is enabled or definite, from claims 1-7, because even if the terms of claims 1-7 are considered not enabled, this terminology of claim 8 can be construed to be enabling even if the other claims terms are not.

Claim 9 depends on claim 1, adding still further details as to what the game assessment means can specifically comprise and what registering of a game event can comprise. Claim 9 adds that the game event assessment means is an external surface of a space vehicle, that the surface is divided into game fields, that the game elements are movable objects which are randomly moving in cosmic space, and that registering of a game event occurrence is effected when a movable object hits a game field. These various details can be separately enabling from those of the other claims, and also separately definite. Since these specific terms are further defined in claim 9, even if claims 1-8 were capable of rejection under section 112, claim 9 could be construed to be separately allowable.

Claim 10 adds further definition to claim 9, saying that the movable objects are meteorite particles. Again, since meteorite particles are objects, the meaning of which one of ordinary skill in the art would clearly understand, claim 10 can separately stand from the other claims, as providing further definition which might be separately understandable, both with respect to enablement and to definiteness.

Claim 11 adds further definition to claim 9, saying that the movable objects are space waste. Again, since space waste is something, the meaning of which one of ordinary skill in the art

could clearly understand, claim 11 can separately stand from the other claims, as providing further definition which might be separately understandable. Even if one did not understand the other claims, the terms of claim 11 could be separately enabling to one of skill in the art, even if those terms in the other claims were not.

Claim 14 recites the technogenic object is a space vehicle, and would be separately enabling from any enabling resolution of its parent claim, because the space vehicle is enabled by its mere recitation.

Claim 15 is similar in standing or falling separate from claim 13 (and others) because it recites the object is space waste, and adds that the game element includes a means for capturing the waste. It is respectfully submitted that these terms can be separately enabled or not, no matter what the determination is on this point with regard to claim 13 or 14.

With regard to the section 112, second paragraph rejection, claims 13-15 stand or fall separately from any of claims 1-12 and 16. The reason for this is that claims 13-15 include the term technogenic, which is a specific terminology that the Examiner recites in making the section 112, second paragraph rejection. Since claims 1-12 and 16 do not include that term, they can be separately allowable or rejectable based on the resolution of the

issues revolving around the term technogenic. Claims 14 and 15 stand or fall together with respect to the section 112, second paragraph issue, but claims 14 and 15 also separately stand or fall from claim 13 with respect to the section 112 second paragraph rejections. The reason for this is that even if the term technogenic is found to be indefinite, claims 14 and 15 each add an even more specific definition of what a technogenic object is. Thus, claim 13 could potentially be found to be indefinite (applicant asserts that it is not) but claims 14 and 15 could be considered definite, given their more detailed definition of the term.

With respect to the section 112, second paragraph rejection, claims 1-12 and 16 do not necessarily stand or fall with claims 13-15, as the claims 13-15 include the term technogenic which the Examiner has raised as one issue under this section, while claims 1-12 and 16 do not contain that particular term, and therefore would be separately allowable if the issue of the technogenic term was decided one way and issues of other terms in claims 1-12 and 16 (which do not include technogenic) were decided another way. The reason is this. If the issue of the term technogenic is decided against applicants, but all other issues of the terms were decide for applicants, then claims 13-15 would be rejected,

but claims 1-12 and 16 would not, thus they would stand or fall separately.

Arguments relative to the rejections

1. Claims 1-16 are in compliance with 35 U.S.C. §112, first paragraph.

The Examiner states that in claims 1, 12 and 13, the specification does not show how one of ordinary skill in the art could "register a game event occurrence using a facility by a spatial position".

Applicants respectfully disagree with the Examiner's assertion here. The specification states, for example, at page 4, line 21, through page 5, line 5, as examples of using spatial position:

said registering of a game event occurrence is effected by a space vehicle which is the fastest to reach the position of the game event assessment means;

the game event assessment means may be a technogenic object relating to space waste which is captured on reaching its position;

said registering of a game event occurrence is effected by a space vehicle which has gone the longest distance to the game event assessment means;

said registering of a game event occurrence is effected by a space vehicle which has gone at the shortest distance from the game event assessment means;

the game event assessment means may be one of the solar system planets;

the game event assessment means may be a space vehicle launched to cosmic space prior

Page 13

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

(\\Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC)

to said accepting bets on a registration of a game event.

These examples all relate to spatial position. It is respectfully submitted that this would be quite clear to anyone of skill in the art, and even to one not of skill in the art. The first to reach a position might be the winning object, the first to capture space waste, the space vehicle going the farthest, the space vehicle going the shortest. These are all clear examples which more than meet the requirements of 35 U.S.C. §112, first paragraph. It is therefore respectfully believed that the claims are in compliance with the statute. It is even stated in the background of the invention that U.S. patent 5,011,157 shows registering a game event occurrence using a facility by a spatial position of the game elements.

The Examiner asks how the interest of the game is captured, what is the benefit, how the assessment means get disposed in space. Applicants have attempted to address the Examiner's questions, but feel that their arguments are not being considered. What is the benefit of any game? How is the interest of any player in a game captured? It is the hope of winning, the thrill of competition. These are underlying social aspects of playing games which are the assumed reasons for having a game. Why must applicants explain why a person would want to

play a game? It is an unfair requirement which is being applied to applicants.

The Examiner asks "how the game assessment means are disposed in cosmic space out side the Earth". Applicants are somewhat astounded that they would be required to answer such a question. The specification clearly states that the game assessment means might be space vehicles, meteorites, or space debris, or a planet of the solar system, etc. A person of ordinary skill in the art would understand how such items get into cosmic space or that they are already there existing. Even small children understand that such items are in space either by their creation or by launching into space from Earth. Applicants are being unfairly rejected. The specification clearly sets out clear and good examples of these things. Applicants are not required by the statute to teach how one builds a space vehicle and launches it into space. Applicants are not required by the statue to teach how meteorites come into existence. Applicants are not required by the statute to explain the creation and placement of the planets of the solar system. Does an applicant patenting a mechanical device have to explain the process of making a gear for the mechanical device? Does an applicant patenting an electronic instrument have to explain the process of how the electricity to power the device is generated? How the

battery operates? Does an applicant patenting shipping protectors that fit within a box have to describe in detail how the craft paper which is used to build a cardboard box is manufactured? No. Similarly, here, applicants have given examples of items which would function for the claimed elements, which are more than sufficient to enable one of ordinary skill in the art to practice the invention, and are not required to provide explanation of what the Examiner seems to be asserting. A space vehicle or meteorite or space waste is already there in space. How it got there is not necessarily what is being claimed, and therefore need not be taught by the specification. Anyone reading this specification can understand. Were the standard that the Examiner is applying to applicants here the standard for any patent application, even simple applications would be thousands of pages long. A patent on a wooden pencil would have to describe how the wood came into existence (i.e., how it was grown, and logged, and milled and shaped and transported, etc.).

With regard to claim 16, the Examiner asserts that "the specification does not show how one of ordinary skill in the art could have "movable objects randomly moving in cosmic space". This concept is clearly set forth in the specification. From reading the specification, it is quite apparent that what is

being referred to here are objects which are in space in movement. Anyone having the slightest knowledge of the existence of outer space would understand that this refers to items which are in space and in motion. Even if one were not aware of this, applicants' specification provides examples of what could be used to accomplish this. Referring to page 5, lines 11-14, several examples are given:

the movable objects may be meteorite particles;  
the movable objects may be particles of technogenic origin, such as space waste.

How can it possibly be said that these examples above would not enable one skilled in the art to make the invention? These are clear and exact examples that even one unskilled in the art would understand. Applicants respectfully believe that the standard of 35 U.S.C. §112, first paragraph has been met.

The Examiner further states that the specification does not show how one of ordinary skill in the art could have a "registration facility being mounted on an external surface of the space vehicle and adapted to detect a game event". Again, applicants respectfully submit that they have complied with the requirements of the stated statute. For example, referring to the specification at page 17, line 16 through page 19, line 15, it is stated:

Owing to the fact that the game is conducted with game elements 1 of artificial,

Page 17  
2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

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2003\\v177correctedappealbrief050103.DOC]

for instance, technogenic, and/or natural origin, such as, small space objects, meteorite particles, the game registration facility 2 should be installed on the external surface of the means 3 (SV) and adapted to detect a game event occurrence in cosmic space and transmit it to the Earth.

The facility 2 must meet the following requirements.

Used as a game field are panels which are part of a surface of the game event assessment means 3 (SV), the panels being specially oriented in space (for instance, all panels are in parallel with the orbit plane) and having the same characteristics of the probability of being hit by the game elements 1 (SPs), including equal areas, the absence or equal degree of shadowing by structure components, thickness, sensitivity of sensors, response time and the recovery ability. If required, nonoperable panels may be replaced by spare panels. The spare panels are introduced in the game instead of those failed.

Means for registration of hitting the means 3 by the game elements 1 should be adapted to register hits by space objects of artificial, for instance, technogenic origin, and/or natural origin, and can be configured as sensors based on various physical principles, with subsequent integration and reliable recording on non-rewritable media (for instance, photographic recording).

A dimension of a game field surface is selected prior to conducting the game by selecting an area, thickness of panels, sensitivity of sensors. The facility 2 is adjusted to such a minimum dimension of a particle registered, for which a game event occurrence (panel breakdown) takes place within an acceptable time, for instance, every five minutes. The equipment is adjusted to maximum participle velocities possible (for instance, 19 km/second for SPs in a satellite orbit), this eliminating the risk of passing fast particles undetected.

The detectors should have a threshold level to eliminate responses to hits by particles which separate while launching the SV and exhibit a lower relative velocity (for instance, less than 100 i/s) due to the laws of celestial mechanics.

Employed in detectors (the aforementioned "Foton", "Dusma", SP-2 instruments) may be the following factors:

Processes of inducing a charge and current in a film capacitor when the material evaporates being hit by an SP, ionization of the panel owing to thermal energy liberation at impact and electrical breakdown between plates of a capacitor which is substantially the game field surface;

When the capacitor plates are short-circuited inside a crater by metal droplets, the bridges are fused by a short-time current pulse from an SV on-board power source.

At a high likelihood, total damages (craters) within a predetermined existence time will not substantially reduce the panel area, and, moreover, due to uniform flow of the game elements 1 (SP) the area of all panels is being varied, in average, at the same amount;

A burst caused by film breakdown is detected by spectrometers, this allowing to differentiate it from the optics exposure to the Sun, the Moon and stars, as well as to television cameras, so that a hit place of a game element 1 can be located. A chemistry of fast particles which generate a plasma cloud at film breakdown can be defined by spectral methods;

Acoustic sensors are located over a perimeter of every panel (over the game field perimeter), and the kinetic energy of particles can be determined by the acoustic pulse energy. Thus, location data of breakdown points is obtained by a pulse arrival delay;

Using film capacitors as the sensors allows the substantially instantaneous registration of particles which breakdown a film of any size. In this case the use is

made of a principle of capacitor discharge through the plasma generated as the result of evaporation of a film and SP material at the instant of film breakdown.

How can it be that the Examiner asserts that there is no showing of how one of ordinary skill in the art could have a registration facility as claimed, when, as noted above, very specific examples of such registration facilities are given? A specific example of using film capacitors as sensors is given. Another example of using acoustic sensors is given.

The cited text above mentions that panels which are part of a surface of the game event assessment means 3 (SV) may be used. (Here, SV means "space vehicle"). Thus, it is clear to the reader, whether skilled in the art or not, that the surface of the space vehicle can be provided with sensors, such as film capacitors or acoustic sensors, which will register collision with meteorites or space waste.

Applicants have set forth examples of how the inventions might be accomplished. It is respectfully submitted that the rejection is not warranted.

2. Claims 1-16 are in compliance with 35 U.S.C. §112,  
second paragraph.

It is well settled that the claims are to be interpreted in light of the specification. The Examiner states that claims 1, 3 and 5-6 further define "the game event assessment means". The

Examiner then states that the "independent claims from which these claims depend from refer to the game elements to at least one game event assessment means". The Examiner then asks "What is the game event assessment means? What is its function(s)?" "What is the function and process?" "What is being assessed?"

These things have been clearly set out in the specification with examples.

Specific recitations in the specification of examples of applicants' game event assessment means" are:

the game event assessment means may be a technogenic object relating to space waste which is captured on reaching its position (page 4, lines 24-25)

the game event assessment means may be one of the solar system planets (page 5, lines 1-2)

the game event assessment means may be a space vehicle launched to cosmic space prior to said accepting bets on a registration of a game event (page 5, lines 3-5)

the game event assessment means may be an external surface of a space vehicle divided into game fields (page 5, lines 6-8)

As for the game elements:

the game elements being movable objects which are randomly moving in cosmic space (page 5, lines 8 and 9)

the movable objects may be meteorite particles (page 5, line 12)

the movable objects may be particles of technogenic origin, such as space waste (page 5, lines 13-14)

Page 21

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant

09/601,913

{\\Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC}

the game elements are space vehicles (page 5,  
lines 17-18)

In making the rejection under rejected under 35 U.S.C. §112, second paragraph, the Examiner simply repeats the same rejection made in the first office action and dismisses applicants' responsive arguments as having been fully considered but they are not persuasive. That is the sum total of the Examiner's explanation of the review of applicants' response to the rejections.

And yet, applicants' made specific and sincere responses to the Examiner's rejections, only to be summarily dismissed without explanation.

Applicants submit herewith a letter in Russian (with an English translation) addressed to applicants' Russian patent attorney (S. V. Lovtsov) from A.I.Burganski, Assistant to the General Designer, Scientific and Technical Instructor of the Departments for Control systems and Space Vehicles Devices, Candidate of Technical Science, Doctor of Electrotechnology, Member of Academy of Electrotechnology, asserting that the specification is clear and enabling to one of skill in the art.

Further submitted herewith in Russian, with an English translation is a document entitled Conclusion of Scientific and Technical Council regarding the application PCT/RU99/00144, from

Page 22

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

[\\"Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC]

the International Payloads Science Technology Center of the Russian Federation.

These documents are further evidence of applicants' claims being allowable.

The Examiner asks "what are the various technical characteristics". Applicants are unclear as to what this question is directed, as this term does not appear in the claims.

The Examiner asks what is a technogenic object. Applicants have responded previously that technogenic means man made, and have submitted examples of its use in aeronautics. Also, on review of the specification, one can derive this meaning from the term's use in the specification, for example:

the game event assessment means may be a technogenic object relating to space waste which is captured on reaching its position (page 4, lines 24-25)

the movable objects may be particles of technogenic origin, such as space waste (page 5, lines 13-14)

the technogenic object may be a space vehicle (page 6, line 6)

the technogenic object may be space waste (page 6, line 7)

space objects of technogenic origin, such as a satellite or space waste (page 8, lines 11-12)

being a technogenic object, for instance, one of space vehicles or space waste (page 12, lines 23-24)

Page 23

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

[\\"Files\Files\Correspondence\May  
2003\v177correctedappealbrief050103.DOC]

space objects of artificial, for instance, technogenic, and/or natural origin, for instance, small space objects, meteorite particles (page 13, lines 10-12)

of artificial, for instance, technogenic, and/or natural origin (page 13, lines 19-20)

the game is conducted with game elements 1 of artificial, for instance, technogenic, and/or natural origin, such as, small space objects, meteorite particles (page 17, lines 16-18)

space objects of artificial, for instance, technogenic origin, and/or natural origin (page 18, lines 2-3).

In view of all these above uses of the term, even if the applicants' submission of outside evidence of the definition of the term were not admitted, it is clear from these examples of use of the term in the specification what is encompassed by the term "technogenic". Applicants previously submitted evidence to the Examiner of the definition of the term, which the Examiner did not even acknowledge. Applicants again assert that "technogenic" is a well known term to those skilled in aeronautics and space, for example.

The Examiner questions the term "longest distance to the game event assessment device", asking where the start and end point are and again questioning "What is the game assessment device." Applicants respectfully submit that these terms are clear and definite, and as noted hereinabove, are defined with

multiple examples in the specification. The Examiner also wants applicant to define how acoustic sensors work and how kinetic energy of particles can be accomplished through using these. It is respectfully submitted that anyone of ordinary skill in the art will be able to practice the invention based on this disclosure. For example, the greater the kinetic energy, the "louder" the impact that would be sensed by an acoustic sensor. One of ordinary skill in the art knows this, and does not need a detailed dissertation on the operation theory of acoustic sensors.

#### CONCLUSION

Applicants submitted an amendment after final which was not entered by the Examiner. However, in the advisory action, the Examiner raised points which the applicants feel must be addressed. The applicants have not introduced any changes into the materials of the application and the responses to the Office Actions are fully based on the primary text of the application as filed. These previous of applicants' explanations comprise no changes of the technical essence of the invention. In the responses the applicants have only submitted the list of additional sources of information, which show that the Examiner's opinion that the invention cannot be executed as it is disclosed in the primary materials has no base and does not correspond to

Page 25

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

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2003\\v177correctedappealbrief050103.DOC]

the known prior art. At this, to respond to the Examiner's questions the applicant has used the whole abstracts from the description. To all the questions the applicants gave concrete replies, which cannot be interpreted in two ways.

To any person, not even specialist in the sphere of astronautics, having the secondary, not special education, it is clear that there are no technical difficulties to execute the racing in the space outside the Earth and register its results in the time of present art. Detecting of the particles hitting the outer surface of the space vehicle also cannot be impracticable because of known practice of conducting such a detecting and even the count of hits of such particles. There are the references to the corresponding sources of information in the primary description of the invention. Also, in the specification the applicants describe concrete examples of the apparatus that realizes this technical solution. It is only necessary to divide the surface of the space vehicle into game fields to realize the method in the part of detecting of the particles hits, but as far as the authors could understand, even this part of invention is considered by the Examiner as being impracticable. On the examiner's opinion it is practicable in the games of "Darts" type, but not in the applied method. Even ill-informed persons, and moreover the inventors, cannot understand the basis of such

and similar conclusions of the Examiner. In spite of a big number of questions the Examiner could not logically explain what concretely it is that the Examiner considers the materials of the application to lack. The applicants have the impression that the Examiner did not wish to consider the technical essence of the invention from the very beginning but tried to demonstrate and certify the lack of the description by the mean of the number of questions useless for disclosure of the essence of the invention. But to the applicants' opinion it came of illogically and poor. All the Examiner's questions have only caused the authors' perplexity as the second Office Action was the exact copy of the first one and showed that the specialist of the US Patent Office respected by every inventor is not accepting the most general questions of astronautics. The questions comprised in the previous Office Actions were artificially far-fetched and caused only confusing of the clearness of the technical essence of the invention.

Though the applicant had obtained the Patent of the Russian Federation for the same technical solution, identical to one submitted into the U.S. Patent and Trademark Office, he in his response to the final Official Action had narrowed the scope of claims by dividing the first independent claim into two. So, claim 1 of the previous wording of the claims was combined with

the claim 2 and in the result there appeared the claim 17. Claim 1 was combined with the claim 9 and in the result there appeared the claim 26. The applicant used no new terms or concepts, not comprised in the claims 1, 2 and 9, while formulating the claims 17 and 26. However, the Examiner based his refusal to enter the amendments that the claim 26 provides new results, which were not set in the primary materials and need further considering and conducting the search. Easily fulfilled and formal combining of the claims by the applicant is legal and causes no additional patent search or change of the essence of the technical solution and also cannot cause appearance of any new subject of invention because no new terms or concepts were used in the new wording of the claims in result of simple change made in set order.

Thus, it is not clear what does the Examiner point to in his final refusal to consider the application, no new subject of the invention were added by the applicant into the application and scope of claims.

To the applicants' opinion the refusal of the US Patent Office to consider the materials of the application is not based on the US Patent Law.

In view of the foregoing, it is submitted that claims 1-16 of this application are patentable and it is accordingly

requested that the Examiner's final rejection be reversed and  
that allowance of this application be directed.

Respectfully submitted,

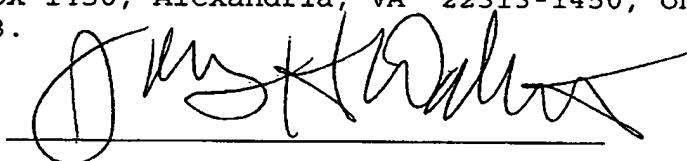


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I hereby certify that this correspondence is being deposited as first class mail with the United States Postal Service in an envelope addressed to the Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1<sup>st</sup> day of May, 2003.



Page 29

2<sup>nd</sup> Corrected Brief on Behalf of  
Appellant  
09/601,913

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Before the Board of Patent Appeals and Interferences

In re Application of

Sergei Mikhailovich SAFRONOV et al

Art Unit: 3713

S. N. 09/601,913

Examiner: A. P. Rada

International S.N.: PCT/RU99/00144

Filed: August 8, 2000

International Filing Date: April 29, 1999

For: METHOD FOR PLAYING A SPACE GAME  
AND DEVICES FOR REALIZING THIS METHOD

APPENDIX OF CLAIMS

1. A method for playing a space game including the steps  
of:

accepting bets on a registration of a game event performed  
by game elements which are capable of moving in space;  
registering a game event occurrence using a facility by a  
spatial position of the game elements relative to at least one  
game event assessment means located in the same space, and  
allotting a payoff,

wherein the game elements and the game event assessment  
means are disposed in cosmic space outside the Earth, said  
registering of a game event occurrence by a facility being  
effected on the Earth.

2. The method according to claim 1 wherein said game  
elements are space vehicles.

3. The method according to claim 2 wherein said registering of a game event occurrence is effected by a space vehicle which is the fastest to reach a position of the game event assessment means.

4. The method according to claim 3 wherein said game event assessment means is a space waste, said space waste being captured on reaching its position.

5. The method according to claim 2 wherein said registering of a game event occurrence is effected by a space vehicle which has gone the longest distance to the game event assessment device.

6. The method according to claim 2 wherein said registering of a game event occurrence is effected by a space vehicle which has gone at the shortest distance from the game event assessment means.

7. The method according to claim 2 wherein said game event assessment means is one of the solar system planets.

8. The method according to claim 2 wherein said game event assessment means is a space vehicle launched prior to said accepting of bets on a registration of a game event.

9. The method according to claim 1 wherein said game event assessment means is an external surface of a space vehicle, said surface being divided into game fields, the game elements being movable objects which are randomly moving in cosmic space, and said registering of a game event occurrence being effected when a movable object hits a game field.

10. The method according to claim 9 wherein said movable objects are meteorite particles.

11. The method according to claim 9 wherein said movable objects are space waste.

12. A device for playing a space game, comprising:  
game elements capable of moving in space;  
game event assessment means for assessing a spatial position of the game elements relative to said game event assessment means, disposed in the same space, and  
a game event occurrence registration facility,  
wherein the game elements and the game event assessment means are located in cosmic space, the game elements being space vehicles, the game event assessment means being an object of natural origin, and the game event occurrence registration facility being adapted to detect a game event occurrence in cosmic space outside the Earth and display the game event occurrence on the Earth.

13. A device for playing a space game, comprising:  
game elements capable of moving in space;  
game event assessment means for assessing a spatial position  
of the game elements relative to said game event assessment  
means, disposed in the same space, and  
a game event occurrence registration facility,  
wherein the game elements and the game event assessment  
means are located in cosmic space, the game elements being space  
vehicles, the game event assessment means being a technogenic  
object, and the game event occurrence registration facility being  
adapted to detect a game event occurrence in cosmic space outside  
the Earth and display the game event occurrence on the Earth.

14. The device according to claim 13 wherein said  
technogenic object is a space vehicle.

15. The device according to claim 13 wherein said  
technogenic object is space waste, the game element being  
provided with means for capturing the space waste.

16. A device for playing a space game, comprising:  
game elements capable of randomly moving in space,  
game event assessment means for assessing a spatial position  
of the game elements on a surface of the game event assessment  
means, said surface being divided into game fields, and

a game event occurrence registration facility for registering a game event occurrence, such as hitting a game field by a game element,

wherein the game elements and the game event assessment means are located in cosmic space, the game elements being movable objects randomly moving in cosmic space, the game event assessment means being an external surface of a space vehicle, the game event occurrence registration facility being mounted on an external surface of the space vehicle and adapted to detect a game event occurrence in cosmic space outside the Earth and transmit game event occurrence data to the Earth.



Федеральное  
государственное унитарное предприятие  
**НАУЧНО-ПРОИЗВОДСТВЕННОЕ  
ОБЪЕДИНЕНИЕ  
МАШИНОСТРОЕНИЯ**

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10 апреля 2002 г.

№ 2-01/506

Генеральному директору Патентно-  
Правовой фирмы "ЮЗ"  
**С.В.Ловцову**

В ответ на Ваш запрос сообщаю, что специалисты нашей корпорации в области создания и эксплуатации систем управления, систем измерений, систем обработки и передачи данных, приборов для космических аппаратов рассмотрели материалы патента России № 2169029 "Способ космической игры и устройство для его осуществления", дата регистрации 20.06.2001 года, международная заявка PCT/RU 99/00144 и установили следующее:

1. Специалистам в области космической техники ясны способы реализации заявленного способа с помощью известных и широко используемых на космических аппаратах устройств.
2. Специалистам в области космической техники понятен текст заявки.
3. Данных, содержащихся в заявке достаточно для технической реализации "Способа космической игры и устройства для его осуществления".
4. Новая редакция описания заявки не изменяет существа и путей технической реализации "Способа космической игры и устройства для его осуществления".

От себя лично могу добавить, что мой многолетний опыт работы с фирмой Хьюз (Hughes) позволяет утверждать о ясности и понятности заявляемого способа для инженеров из США.

С уважением,

Заместитель Генерального конструктора,  
Научно-технический руководитель 2-го отделения  
систем управления и приборов КА  
Кандидат технических наук,   
доктор  
электротехники, член академии электroteхники

А.И.Бурганский

Federalnoe  
Gosudarstvennoe unitarnoe predpriyatiye  
**NAUCHNO-PROIZVODSTVENNOE**  
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Patent & Law Firm "YUS"  
Director General  
**S.V.LOVTSOV**

April 10, 2002 No.2-01506

In response to your query inform you that the specialists of our corporation in the sphere of creation and exploitation of the control systems, measuring systems, systems of processing and transferring of information, devices for the space vehicles have considered the materials of the Patent of the Russian Federation No.2169029 "METHOD FOR PLAYING A SPACE GAME AND DEVICES FOR REALISING THIS METHOD" date of registration 20.06.2001, International Application No. PCT/RU99/00144 and found the following:

1. Methods for realization of the applied method by the means of known and widely used in the space vehicles devices are clear to the specialists in the sphere of space technology.
2. The text of the application is clear to the specialists in the sphere of space technology.
3. Information comprised in the application is enough for technical realization of "METHOD FOR PLAYING A SPACE GAME AND DEVICES FOR REALISING THIS METHOD".
4. New wording of the description of the application does not change the essence and the ways of the technical realization of "METHOD FOR PLAYING A SPACE GAME AND DEVICES FOR REALISING THIS METHOD".

From my own side I can add that my long term experience of co-operation with the firm HUGHES permits me to assert that the applied method is clear and plain to the engineers from the USA.

Sincerely,  
Assistant to the General Designer,  
Scientific and technical instructor of the Departments  
for Control systems and Space vehicles devices,  
Candidate of technical science,  
Doctor of electrotechnology, Member of  
Academy of Electrotechnology

Stamp      Signature      A.I.Burganski

МЕЖДУНАРОДНЫЙ НАУЧНО-ТЕХНИЧЕСКИЙ СОВЕТ  
ПО ЛЕГЕНДАМ ГРУЗОВЫХ КОСМИЧЕСКИХ СЪБЫТИЙ  
INTERNATIONAL PAYLOADS SCIENCE TECHNOLOGY COMMITTEE

14110, Московская обл., г. Мутино, Приволжский пр-т, д. 10

26.04.2002 № 259

ЗАКЛЮЧЕНИЕ  
научно-технического совета  
по заявке PCT/RU99/00144

Научно-техническим советом МНТЦ ПНКО рассмотрены материалы заявки PCT/RU99/00144 и сделано следующее заключение:

Из-за использования результатов экспериментальных исследований воздействия (создания) микрометрических частиц на поверхность космического плавательного аппарата и рассматриваемого в космосе явления, мировое событие отличается новизной и оригинальностью.

Создание же на орбите игрового поля большой площади (до 40 м<sup>2</sup> и более) не только повысит вероятность регистрации события (создание ядра из микрочастичных систем), но и позволит начать производство в космосе широкомасштабных экспериментов по уточнению микрометеоритической среды для оценки безопасности космических полетов, а также игровое поле может раз по площади больше, чем земля, что, в свою очередь, может использовать для регистрации микрометрических частиц в настоящем времени; в то время спутник может будущим природу микрочастицы, т.е. ответить на вопрос космогенного или термогенного происхождения.

3. Моделизацию в заявке технические решения реализуются в соответствии с уровнем техники, что уже более 20 лет подтверждается космическими и по многоточечным наблюдениям космической микрометеоритной атмосфере.

Председатель Совета  
Генеральный директор  
Института, профессор

Главный конструктор Совета  
Государственной комиссии по  
Техническим наукам

В.П. Некрасов

Л.О. Неструев

# **INTERNATIONAL PAYLOADS SCIENCE TECHNOLOGY CENTER**

**26.04.2002 No.159**

## **CONCLUSION of Scientific and Technical Council regarding the application PCT/RU99/00144**

The Scientific and Technical Council of International Payloads Science Technology Center has considered the materials of the application No. PCT/RU99/00144 and made the following conclusion:

1. The idea to use the results of the experimental researches of the micrometeorite influence (hitting) upon the surface of the space vehicle and to consider it as the game event possesses novelty and originality.

Creation of the big area (up to 40 m<sup>2</sup> and more) of the game field in the orbit will not only increase the possibility of the event (hitting) registration for the short time period but will also permit to begin carrying out of the wide-scaled experiments in the cosmic space in respect of clarification of the space environment model for estimation of the space flies safety as the game field is hundred times bigger than the experimental panels still used for registration of the meteorite particles and the energy of hitting will help to determine the nature of the micro particle, i.e. answer the question if it is of cosmogenic or echnogenic nature.

2. The technical solutions set in the application are realizable at the present art. It is being experimentally confirmed for more than 20 years and is known to wide circle of people by multiple publications.

Stamp

Chairman of the council

Director General

Professor

Signature

V.P.Nikitsky

Scholar secretary

Candidate of Technical science

Signature

L.O.Neznamova